WHAT IS CLAIMED IS:

1. A receiver in a fiber optic system configured to receive an optical signal of varying light intensity and to produce a data output signal proportional thereto, the receiver comprising:

an optical detector configured to receive the optical signal, the optical detector having a dynamic range of sensitivity between a high optical intensity value and a low optical intensity value, the optical detector further configured to convert the received optical signal into an analog electrical signal proportional to the optical intensity of the optical signal;

an electronic circuit coupled to the optical detector, the electronic circuit configured to receive the analog electrical signal from the optical detector and to produce digital signals representative of the optical intensity of the optical signal such that the electronic circuit is configured to have an original maximum digital value proportional to the high optical intensity value and an original minimum digital value proportional to the low optical intensity value thereby defining an original receiver resolution between the original minimum and maximum digital values; and

an adjustment circuit coupled to the electronic circuit configured to allow the original maximum digital value to be adjusted to an adjusted maximum digital value and to allow the original minimum digital value to be adjusted to an adjusted minimum digital value thereby defining an adjusted receiver resolution between the adjusted minimum and maximum digital values.

2. The receiver of claim 1 wherein the adjusted maximum digital value is different than the original maximum digital value.

3. The receiver of claim 1 wherein the adjusted minimum digital value is different than the original minimum digital value.

4. The receiver of claim 1 wherein the adjusted maximum digital value is lower than the original maximum digital value and the adjusted minimum digital value is higher than the original minimum digital value such that the adjusted receiver resolution is finer than the original receiver resolution.

5. The receiver of claim 1 wherein the adjusted maximum digital value is proportional to a highest anticipated optical value for the optical signal received by the optical detector and wherein the adjusted minimum digital value is proportional to a lowest anticipated optical value of the optical signal received by the optical detector.

6. The receiver of claim 1 wherein the adjusted maximum digital value is less than the original maximum digital value and is proportional to a highest anticipated optical value for the optical signal received by the optical detector and wherein the adjusted minimum digital value is higher than the original minimum digital value is proportional to a lowest anticipated optical value of the optical signal received by the optical detector.

7. The receiver of claim 1 wherein the dynamic range of sensitivity is between a high optical intensity value of positive 7dBm and a low optical intensity value of negative 20dBm.

8. The receiver of claim 1 wherein the electronic circuit includes an analog-to-digital converter configured to receive the analog electrical signal and to convert the electrical signal into digital signals.

9. The receiver of claim 8 wherein the analog-to-digital converter converts the analog electrical signal into a series of 8-bit digital values.

10. The receiver of claim 9 wherein the lowest 8-bit digital value is originally the original minimum digital value and then adjusted to the adjusted

minimum digital value, and wherein the highest 8-bit digital value is originally the original maximum digital value and then adjusted to the adjusted maximum digital value.

11. The receiver of claim 1 assembled into a intelligent small form factor pluggable module for use with a fiber optic system.

12. A fiber optic communication system comprising:

a signal transmitter that produces optical signals of varying light intensity;

an optical fiber coupled to the signal transmitter that receives and transmits the optical signals;

a receiver coupled to the optical fiber that receives the optical signals and produces a data signal proportional thereto, the receiver further comprising:

an optical detector configured to receive the optical signals, the optical detector having a dynamic range of sensitivity between a high optical value and a low optical value, the optical detector further configured to convert the received optical signals into electrical signals proportional to the optical intensity of the optical signals;

an electronic circuit coupled to the optical detector, the electronic circuit configured to receive the electrical signals from the optical detector and to have an initial digital range representative of the dynamic range, the initial digital range being defined between an initial maximum digital value and an initial minimum digital value, the initial maximum digital value being proportional to high optical value and the initial minimum digital value being proportional to low optical value; and

an adjustment circuit coupled to the electronic circuit configured to allow the initial maximum digital value to be adjusted to an adjusted maximum digital value and to allow the initial minimum digital value to be adjusted to an adjusted minimum digital value thereby defining an adjusted digital range, the adjusted maximum digital value being

proportional to a highest anticipated optical value and the adjusted minimum digital value being proportional to a lowest anticipated optical value.

13. The fiber optic communication system of claim 12 wherein the adjusted maximum digital value is different than the initial maximum digital value.

14. The fiber optic communication system of claim 12 wherein the adjusted maximum digital value is lower than the initial maximum digital value and the adjusted minimum digital value is higher than the initial minimum digital value such that the adjusted digital range has more steps than the initial digital range.

15. The fiber optic communication system of claim 12 wherein the electronic circuit includes an analog-to-digital converter configured to receive the analog electrical signal and to convert the electrical signal into a digital signal.

16. The fiber optic communication system of claim 12 wherein the receiver is assembled into an intelligent small form factor pluggable module for use in the fiber optic system.

17. A receiver in a fiber optic system, the receiver comprising:

an optical detector configured to receive an optical signal of varying light intensity, the optical detector having a dynamic range of sensitivity between a high optical intensity value and a low optical intensity value, the optical detector further configured to convert the received optical signal into an analog electrical signal proportional to the optical intensity of the optical signal;

an electronic circuit coupled to the optical detector, the electronic circuit configured to receive the analog electrical signal from the optical detector and to produce digital signals representative of the optical intensity of the optical signal such that the electronic circuit is configured with an original maximum digital value proportional to the high optical intensity value and an original minimum

digital value proportional to the low optical intensity value thereby defining an original receiver resolution between the original minimum and maximum digital values; and

adjustment means coupled to the electronic circuit for adjusting the original maximum digital value to an adjusted maximum digital value and for adjusting the original minimum digital value to an adjusted minimum digital value thereby defining an adjusted receiver resolution between the adjusted minimum and maximum digital values.

18. A method of adjusting the resolution of a receiver in a fiber optic system, the method including the steps of:

providing an optical detector with a dynamic range sensitivity between a highest optical value and a lowest optical value;

providing an initial digital range representative of the dynamic range, the initial digital range being defined between an initial maximum digital value and an initial minimum digital value, the maximum digital value being proportional to highest optical value and the minimum digital value being proportional to lowest optical value;

determining an actual optical range for a fiber optic system application, the actual optical range defined between a highest actual optical value and a lowest actual value; and

adjusting the initial digital range to an adjusted dynamic range, the adjusted digital range being defined between an adjusted maximum digital value and an adjusted minimum digital value, the adjusted maximum digital value being proportional to highest actual optical value and the adjusted minimum digital value being proportional to lowest actual optical value.

19. The method of claim 18 wherein the step of adjusting the initial digital range to an adjusted dynamic range includes adjusting the maximum digital

value to be lower than the initial maximum digital value such that the adjusted digital range has more steps than the initial digital range.

20. The method of claim 18 wherein the step of adjusting the initial digital range to an adjusted dynamic range includes adjusting the minimum digital value to be higher than the initial minimum digital value such that the adjusted digital range has more steps than the initial digital range.